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| 10/678,151 | 10/06/2003 | Reinhard Stuber | P23910 | 5748 |
| 7055 | 7590 | 12/14/2004 | EXAMINER | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | HINZE, LEO T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2854 | |

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,151

Applicant(s)

STUBER ET AL.

Examiner

Leo T. Hinze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 12-13, 16 and 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Blau et al., US 2001/0013289 A1 (Blau).

Regarding claim 1, Blau teaches a printing mechanism (23, Fig. 2) of a machine of the tobacco processing industry comprising a tempering device (§ 0012, lines 2-3).

Regarding claim 2, Blau also teaches wherein the machine is a cigarette rod machine (§ 0001, line 11).

Regarding claim 3, Blau also teaches wherein said tempering device comprises at least one of at least one heating device and or at least one cooling device (“automatically compensate for temperature”, § 0012, lines 2-3).

Regarding claim 12, Blau also teaches wherein said tempering device comprises a control or regulating unit (“regulate certain other important parameters such as ... changes of temperature”, § 0047, lines 4-7).

Regarding claim 13, Blau also teaches an ink nozzle (53, Fig. 2).

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Regarding claim 16, Blau also teaches a plurality of distributor rollers (44, Fig. 2), a stamp roller (48, Fig. 2), and a pressure roller (52, Fig. 2), wherein two of said plurality of distributor rollers (43, 46, Fig. 2) are arranged to receive ink from said ink nozzle, and said stamp roller and said pressure roller are arranged to guide a paper strip to be printed (21, Fig. 2).

Regarding claim 32, Blau teaches a machine of the tobacco processing industry comprising the printing mechanism in accordance with claim 1 (§ 0001).

Regarding claim 33, Blau also teaches wherein said machine is a cigarette rod machine (§ 0001, line 11).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any invention's covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in

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order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 4, 14, 18-23, 28-29 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blau in view of Voge, US 6,516,721 (Voge).

a. Regarding claim 4:

Blau teaches: all that is claimed as discussed in claim 3 above; an ink supply, a metering device, and an ink nozzle (53, 43, 47, Fig. 2); regulating certain other important parameters such as the consistency of printing ink (§0047). Blau is silent as to the exact means used to regulate the consistency of the printing ink.

Blau does not teach said heating device being located with at least one of said ink supply, metering device, and ink nozzle.

Voge teaches: said heating device (70, Fig. 4) being located with at least one of said ink supply (conduit 66, Fig. 4); that heating the ink has an effect on the viscosity and consistency of the ink (col. 3, lines 20-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blau to heat the ink and locate the heating device in the ink supply, because Voge teaches that heating the ink is an effective way of regulating the consistency of the ink.

b. Regarding claim 5, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 3 above, including wherein the heating device comprises a heating cartridge (Voge, item 70, Fig. 4 shows a resistor heating element).

c. Regarding claim 14:

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Blau teaches all that is claimed as discussed in the rejection of claim 3 above, including an ink supply, a metering device, and an ink nozzle (53, 43, 47, Fig. 2); regulating certain other important parameters such as the consistency of printing ink (§0047). Blau is silent as to the exact means used to regulate the consistency of the printing ink.

Voge teaches: said heating device (70, Fig. 4) being located with at least one of said ink supply (conduit 66, Fig. 4); that heating the ink has an effect on the viscosity and consistency of the ink (col. 3, lines 20-30). Voge shows the heating element very close to the ink nozzle (36, Fig. 4).

It has been held that the mere rearrangement of parts is not sufficient to patentably distinguish over the prior art. See MPEP§ 2144.04(VI).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blau to use a heating cartridge located in the ink supply to heat the ink, because Voge teaches that heating the ink is an effective way of regulating the consistency of the ink.

It would have been obvious to one having ordinary skill in the art to additionally modify Blau to locate the heating cartridge integrally in or to lie against the ink nozzle, because one having ordinary skill in the art would recognize that the ink supply does encompass the ink nozzle, and it would be advantageous to locate the heater at the point furthest downstream in the ink supply, to minimize the temperature drop of the ink after the heating cartridge and before the ink exits the nozzle.

d. Regarding claim 18:

Blau teaches a process for printing with a printing mechanism (23, Fig. 2) that includes a tempering device (§ 0012, lines 2-3), including regulating the consistency of the ink (§0047). Blau is silent as to the exact means used to regulate the consistency of the printing ink.

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Blau does not teach adjusting the temperature of ink in the printing mechanism via the tempering device.

Voge teaches: said heating device (70, Fig. 4) being located with at least one of said ink supply (conduit 66, Fig. 4); that heating the ink has an effect on the viscosity and consistency of the ink (col. 3, lines 20-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blau to heat the ink and locate the heating device in the ink supply, because Voge teaches that heating the ink is an effective way of regulating the consistency of the ink.

e. Regarding claim 19, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 18 above, including wherein the printing mechanism is located in a machine of the tobacco processing industry (Blau, ¶ 0001, line 11).

f. Regarding claim 20, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 19 above, including wherein the machine is a cigarette rod machine (Blau, ¶ 0001, line 11).

g. Regarding claim 21, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 18 above, including wherein the tempering device includes a heating element and wherein the ink temperature is adjusted by heating device (Voge, col. 3, lines 20-30).

h. Regarding claim 22, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 21 above, including wherein the ink temperature is adjusted in the ink supply by the heating element (Voge; 70, Fig. 4; col. 3, lines 20-30).

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- i. Regarding claim 23, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 22 above, including wherein the heating element comprises a heating cartridge (Voge, 70, Fig. 4).
- j. Regarding claim 28, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 18 above, including regulating the tempering device through a control or regulation device (Voge, col. 3, lines 20-30; "central printing machine control," col. 7, lines 30-31).
- k. Regarding claim 29, the combination of Blau and Voge teaches all that is claimed as discussed in the rejection of claim 18 above.

The combination of Blau and Voge does not teach heating the ink in the nozzle.

It has been held that the mere rearrangement of parts is not sufficient to patentably distinguish over the prior art. See MPEP§ 2144.04(VI).

It would have been obvious to one having ordinary skill in the art to additionally modify Blau to locate the heating cartridge integrally in or to lie against the ink nozzle, because one having ordinary skill in the art would recognize that the ink supply does encompass the ink nozzle, and it would be advantageous to locate the heater at the point furthest downstream in the ink supply, to minimize the temperature drop of the ink after the heating cartridge and before the ink exits the nozzle.

- l. Regarding claim 34:

Blau teaches a process for printing a cigarette paper strip in the machine in accordance with claim 32, said process comprising: guiding the cigarette paper strip to a printing mechanism (§0039, lines 9-14); and regulating the consistency of the ink (§0047). Blau is silent as to the exact means used to regulate the consistency of the printing ink.

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Blau does not teach adjusting the temperature of ink in the printing mechanism via the tempering device.

Voge teaches: said heating device (70, Fig. 4) being located with at least one of said ink supply (conduit 66, Fig. 4); that heating the ink has an effect on the viscosity and consistency of the ink (col. 3, lines 20-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blau to heat the ink and locate the heating device in the ink supply, because Voge teaches that heating the ink is an effective way of regulating the consistency of the ink.

5. Claims 6, 15, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blau in view of Voge as applied to claims 3, 13 and 18 above, and further in view of Garner et al., US 5,611,278 (Garner).

a. Regarding claim 6:

The combination of Blau and Voge substantially teaches all that is claimed as discussed in the rejection of claim 3 above, including an ink supply, a metering device, and an ink nozzle (Blau, 53, 43, 47, Fig. 2). Voge teaches feeding ink in a range of temperature and pressure, which implies sensors to ensure that proper pressure and temperature, although Voge is silent as to the location of such sensors (col. 3, lines 20-30).

The combination of Blau and Voge does not explicitly teach a temperature sensor positioned one of: near at least one of said ink supply, metering device, and ink nozzle; or on or in at least one of said ink supply, metering device, and ink nozzle.

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Garner teaches a temperature controlled system for printing press, including a refrigeration and heating system (col. 2, lines 2-3), and an ink temperature sensor located in the ink supply system (col. 2, lines 11-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Blau to include a temperature sensor located in the ink supply, because Garner teaches a temperature sensor located in the ink supply, and one having ordinary skill in the art would recognize that a sensor would make the regulation of temperature more efficient and accurate by allowing the control system to know the temperature of the ink, which would allow for more precise control of the temperature of the ink.

b. Regarding claims 15 and 30:

The combination of Blau and Voge substantially teaches all that is claimed as discussed in the rejection of claims 13 and 18 above. Voge teaches feeding ink in a range of temperature and pressure, which implies sensors to ensure that proper pressure and temperature, although Voge is silent as to the location of such sensors (col. 3, lines 20-30).

The combination of Blau and Voge does not explicitly teach a temperature sensor positioned one of: in and on said ink nozzle.

Garner teaches a temperature controlled system for printing press, including a refrigeration and heating system (col. 2, lines 2-3), and an ink temperature sensor located in the ink supply system (col. 2, lines 11-14).

It has been held that the mere rearrangement of parts is not sufficient to patentably distinguish over the prior art. See MPEP§ 2144.04(VI).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Blau to include a temperature sensor located in or on the ink nozzle, because Garner teaches a temperature sensor located in the ink supply, and one having ordinary skill in the art would recognize that: a temperature sensor would make the regulation of temperature more efficient and accurate by allowing the control system to know the temperature of the ink, which would allow for more precise control of the temperature of the ink; locating the temperature sensor on the ink nozzle would minimize the temperature drop of the ink after being sensed, thereby allowing more accurate control of the ink temperature of the ink deposited on the rollers.

6. Claims 7-9 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blau in view of Voge as applied to claims 3 and 21 above, and further in view of Feller et al., US 6,065,402 (Feller).

a. Regarding claims 7 and 24:

The combination of Blau and Voge substantially teach all that is claimed as discussed in the rejection of claims 3 and 21 above. Blau teaches regulating certain other important parameters such as the consistency of printing ink (§0047), but is silent as to the exact means used to regulate the consistency of the printing ink.

The combination of Blau and Voge does not teach wherein said cooling element comprises a cooling plate.

Feller teaches wherein said cooling element comprises a cooling plate (9, Fig. 1), which helps prevent excessive heating of the ink (col. 1, lines 54-56).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Blau to include a cooling plate, because Feller teaches that a cooling plate helps prevent excessive heating of the ink, and one having ordinary skill would recognize that a cooling plate would help regulate the temperature and therefore the consistency of the ink.

b. Regarding claim 8, the combination of Blau, Voge and Feller substantially teaches all that is claimed as discussed in the rejection of claim 7 above. Feller also teaches wherein said cooling element is structured and arranged for a medium to flow through the cooling element (8, Fig. 1; col. 3, lines 8-11).

c. Regarding claim 9, the combination of Blau, Voge and Feller substantially teaches all that is claimed as discussed in the rejection of claim 7 above. Feller also teaches an ink supply (3, Fig. 1) and a metering device (6, Fig. 1), wherein said ink supply and metering device, are at least partially located on the cooling plate (Fig. 1).

d. Regarding claim 25, the combination of Blau, Voge and Feller substantially teaches all that is claimed as discussed in the rejection of claim 24 above. Feller also teaches flowing a medium through the cooling element (8, Fig. 1; col. 3, lines 8-11).

e. Regarding claim 26, the combination of Blau, Voge and Feller substantially teaches all that is claimed as discussed in the rejection of claim 21 above. Feller also teaches wherein at least some components of the printing mechanism are located at least partially on the cooling plate, whereby the components are cooled by the cooling plate (3, 6, Fig. 1).

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7. Claims 10-11 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blau in view of Voge and Feller as applied to claims 7 and 21 above, and further in view of Ayres et al., US 5,810,927 (Ayres).

a. Regarding claims 10 and 27:

The combination of Blau and Voge substantially teach all that is claimed as discussed in the rejection of claims 7 and 21 above. Blau teaches regulating certain other important parameters such as the consistency of printing ink (§0047), but is silent as to the exact means used to regulate the consistency of the printing ink.

The combination of Blau, Voge and Feller does not teach wherein said cooling element comprises a device structured to produce a cooled airflow.

Ayres teaches an ink temperature control device (9, Fig. 1), including modules (10, Fig. 1) which include fans (11, Fig. 2) which blow air and create eddy currents and help maintain the temperature of the ink (col. 1, lines 37-39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Blau to include a device to produce cooled airflow, because Ayres teaches that such a device is useful for cooling the ink, and one having ordinary skill in the art would recognize that such a device would be advantageous in helping to regulate the temperature and the consistency of the ink.

b. Regarding claim 11, the combination of Blau, Voge, Feller and Ayres teaches all that is claimed as discussed in the rejection of claim 10 above, including wherein said cooling element comprises an eddy current generator (the fan of Ayres will create eddy currents in the air).

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8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blau in view of Voge and in view of Dillig et al., US 6,024,015 (Dillig).

Blau substantially teaches all that is claimed as discussed in the rejection of claim 13 above.

Blau does not teach a device to measure ink pressure before discharge from said ink nozzle.

Dillig teaches a pressurized inking system (Fig. 1), including a pressure monitor (17, Fig. 1) to ensure that an adequate ink supply is provided at all times.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blau to include a pressure sensor in the ink nozzle, because Dillig teaches that pressure sensors in pressurized inking systems are advantageous for ensuring that an adequate ink supply is provided at all times.

Response to Arguments

9. Applicant's arguments filed 30 September 2004 with respect to the rejection of claims 1-3, 12-13, 16 and 32-33 under 35 U.S.C. § 102 have been fully considered but they are not persuasive. The examiner disagrees that Blau fails to provide any disclosure of a tempering device, as asserted by applicant on page 9. Blau teaches a printing machine with a tempering device ("an apparatus which can automatically compensate for changes in temperature," ¶0012).

10. Applicant's arguments, see pages 7-23, filed 30 September 2004, with respect to the rejection(s) of claim(s) 4-11, 14-15, 17-30 and 34 under 35 U.S.C. §§ 102(b) and 103(a) have been fully considered and are persuasive. The examiner agrees with the applicant that while Blau does teach a tempering device as claimed in independent claims 1 and 32, Blau does not teach a tempering device for controlling the temperature of the ink. Therefore, the rejections have been withdrawn.

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However, upon further consideration, a new ground(s) of rejection is made in view of the newly applied prior art.

11. In response to applicant's arguments that there is no suggestion to combine the references of Voge, Feller and Ayres because of an extreme difference in size between the apparatus of these references and the apparatus of the instant application, MPEP § 2144.04(IV) teaches that mere changes in size over prior art devices are not sufficient to establish patentability. In the case of these three references, and the additional references of Garner and Dillig applied in this action, the examiner asserts that their combination with the Blau reference is proper and the necessary motivation is provided as discussed in the rejections under 35 U.S.C. § 103(a) above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

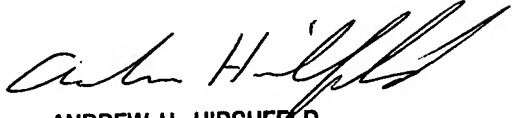
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
Patent Examiner
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2 December 2004



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